CAM BASED SYSTEM AND METHOD FOR
RE-SEQUENCING DATA PACKETS

ABSTRACT

A system for resequencing data packets is disclosed. In a
preferred embodiment, the system operates in a parallel packet
switch architecture having at least one egress adapter arranged
to receive data packets issued from a plurality of ingress
adapters and switched through a plurality of independent
switching planes. Each received data packet belongs to one
sequence of data packets among a plurality of sequences where the
data packets are numbered with a packet sequence number (PSN)
assigned according to at least a priority level of the data
packet. Each data packet received by the at least one egress
adapter is further having a source identifier to identify the
ingress adapter from which it is issued. The system for restoring
the sequences of the received data packets operates within the
egress adapter and comprises buffer for temporarily storing each
received data packet at an allocated packet buffer location.
Furthermore, controller to extract the packet sequence number,
the source identifier and the priority level of each stored data
packet. And determination means coupled to the storing means and
to the extracting means allow to determine for each sequence of
data packet the order of the data packets to be output from the
egress adapter.